REMARKS

The Substitute Sequence Listing submitted herewith corrects some obvious errors in the original Sequence Listing submitted for parent application USSN 09/603,713 on June 27, 2000 and includes additional sequences omitted from the original which are required to conform to 37 C.F.R. §§1.821 to 1.825. SEQ ID NOS:32-34 have been added to the Substitute Sequence Listing from Figure 1, and SEQ ID NOS:36-39 have been added from Table 1, in order to include those amino acid sequences of 4 or more residues.

Table 1 has been amended to include sequence identifiers for SEQ ID NOS:36-39 (Site #1-4) and retention of the original notations for the amino acid positions in SEQ ID NO:3 in parentetical form. Also amended were the formats for other sequence identifiers present in the table. In addition, the sequence identifiers have been aligned with the table rows showing the amino acid sequences for SEQ ID NOS:22-26 and a "Comments" header has been added for clarity. This also required repositioning the notations "C^ is cysteic acid" and "Three sites cleaved in a peptide:VGSGVLLSRK (SEQ ID NO:30)" under the "Comments" header. A clean copy of the amended Table 1 is also enclosed for the convenience of the Examiner.

The "Organism" numeric identifier <213> describing the Genus and species or "Artificial Sequence" and/or numeric identifier <223> "Description of Artificial Sequence" data elements have been changed in some cases (i.e., SEQ ID NOS:4-29) to properly reflect their presentation as free text in the Specification.

SEQ ID NO:8 appears in the Specification on page 14, line 25, as "Asp-Thr/Ser-Gly-", where the original Sequence Listing had entered this sequence as a tetrapeptide. One of ordinary skill in the art would recognize that the aspartic protease cleavage motif consists of a tripeptide where the second amino acid residue can be either Thr or Ser. The Substitute Sequence Listing submitted herewith entered this sequence with the second residue represented as "Xaa" with a Feature decribing the alternative residues at that position.

SEQ ID NOS:27, 29 and 35 have included a Feature to describe the modified amino acids at those positions containing a non-peptide bond in the form of the transition-state isostere hydroxyethylene. SEQ ID NO:35, the OM99-2 inhibitor, was added to the Substitute

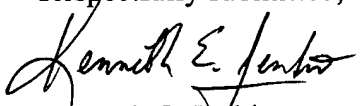
Sequence Listing to reflect the modified form of the sequence presented on page 36, line 20, and Figures 3B and 8 as opposed to the unmodified form in SEQ ID NO:28 on page 6, lines 15-16, and page 47, line 8. SEQ ID NO:28 has been retained in the form containing no modified amino acids or non-peptide bonds to distinguish this sequence from the modified form containing the transition-state isostere.

Applicants request entry of this amendment in adherence with 37 C.F.R. §§1.821 to 1.825. This amendment is accompanied by a floppy disk containing the above named sequences, SEQ ID NOS:1-39, in computer readable form, and a paper copy of the sequence information which has been printed from the floppy disk.

The information contained in the computer readable disk was prepared through the use of the software program "PatentIn" and is identical to that of the paper copy. This amendment contains no new matter.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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KEJ:dmw
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[110] Table 1: Substrate Specificity of Memapsin 2

Site #	Substrate	P4	P3	P2	P1	P1'	P2'	P3'	P4'	Comments
1	Pro-memapsin 2	R	G	S	M	A	G	V	L	SEQ ID NO:36 (aa 12-18 of ~~SEQ ID No. 3~~ SEQ ID NO:3)
2		G	T	Q	H	G	I	R	L	SEQ ID NO:37 (aa 23-30 of ~~SEQ ID No. 3~~ SEQ ID NO:3)
3		S	S	N	F	A	V	G	A	SEQ ID NO:38 (aa 98-105 of ~~SEQ ID No. 3~~ SEQ ID NO:3)
4		G	L	A	Y	A	E	I	A	SEQ ID NO:39 (aa 183-190 of ~~SEQ ID No. 3~~ SEQ ID NO:3)
5	Oxidized insulin B-chain'	H	L	C^	G	S	H	L	V	~~C^ is cysteic acid;~~ SEQ ID NO:22 ~~SEQ ID No. 22~~ ~~SEQ ID No. 23~~ SEQ ID NO:23 C^ is cysteic acid
6		C^	G	E	R	G	F	F	Y	
7	Synthetic peptide				V	G	S	G	V	~~Three sites cleaved in a peptide:~~ SEQ ID NO:24 ~~VGSGVLLSRK (SEQ ID NO:30)~~ ~~SEQ ID No. 24~~ SEQ ID NO:25 ~~SEQ ID No. 25~~ ~~SEQ ID No. 26~~ SEQ ID NO:26 Three sites cleaved in a peptide: VGSGVLLSRK (SEQ ID NO:30)
8			V	G	S	G	V	L	L	
9		G	V	L	L	S	R	K		
10	Peptide	L	V	N	M	A	E	G	D	~~SEQ ID No. 9~~ SEQ ID NO:9

[110] Table 1: Substrate Specificity of Memapsin 2

Site #	Substrate	P4	P3	P2	P1	P1'	P2'	P3'	P4'	Comments
1	Pro-memapsin 2	R	G	S	M	A	G	V	L	SEQ ID NO:36 (aa 12-18 of SEQ ID NO:3)
2		G	T	Q	H	G	I	R	L	SEQ ID NO:37 (aa 23-30 of SEQ ID NO:3)
3		S	S	N	F	A	V	G	A	SEQ ID NO:38 (aa 98-105 of SEQ ID NO:3)
4		G	L	A	Y	A	E	I	A	SEQ ID NO:39 (aa 183-190 of SEQ ID NO:3)
5	Oxidized insulin B-chain'	H	L	C^	G	S	H	L	V	SEQ ID NO:22
6		C^	G	E	R	G	F	F	Y	SEQ ID NO:23 C^ is cysteic acid
7	Synthetic peptide				V	G	S	G	V	SEQ ID NO:24
8			V	G	S	G	V	L	L	SEQ ID NO:25
9		G	V	L	L	S	R	K		SEQ ID NO:26 Three sites cleaved in a peptide: VGSGVLLSRK (SEQ ID NO:30)
10	Peptide	L	V	N	M	A	E	G	D	SEQ ID NO:9